

Amendments to the Claims:

1. (Currently amended) A method for controlling the operation of devices ~~(61,62,63)~~ of a hydrocarbon production system, comprising the steps of:

(a) connecting at least one remote master controller ~~(101)~~ to at least two central controllers ~~(100)~~ via a command/signal bus ~~(120)~~ and connecting the at least two central controllers ~~(100)~~ to at least one local controller via a common data bus ~~(130)~~, the central controllers ~~(100)~~ being reprogrammable and ~~the~~ at least one local controller~~(s)~~ being configured to locally control the operation of at least one respective device ~~(61,62,63)~~,i

(b) transmitting data between the central controllers ~~(100)~~ and ~~the~~ at least one local controller~~(s)~~ via the common data bus ~~(130)~~ in response to said central controllers (100) receiving signals[[,]]; i

(c) processing said transmitted data ~~at the~~ within at least one local controller~~(s)~~,i and

(d) transmitting data between ~~the~~ at least one local controller~~(s)~~ and ~~its~~ at least one associated device~~(s)~~ ~~(61,62,63)~~ according to the processed data so as to locally control the operation of ~~the~~ at least one device~~(s)~~ ~~(61,62,63)~~.

2. (Currently amended) The method as claimed in claim 1, wherein ~~method step (b)~~ the step of transmitting data between the central controllers and at least one local controller includes transmitting data between the central

controllers ~~(100)~~ and ~~the~~ at least one local controller~~(s)~~ in response to said central controllers ~~(100)~~ receiving signals from any other central controller, ~~and/or~~ or from ~~the~~ at least one local controller~~(s)~~.

3. (Currently amended) The method as claimed in claim 1 ~~or 2~~, including the step of transmitting data between ~~the~~ at least one master controller~~(s)~~ ~~(101)~~ and the central controllers ~~(100)~~ so as to remotely monitor the central controllers.

4. (Currently amended) The method as claimed in ~~any~~ preceding claim 1, including the steps of:

adding at least one device ~~(64)~~ and ~~its~~ at least one associated local controller~~(s)~~ to the hydrocarbon production system~~[[,]]~~;

transmitting data between ~~the~~ at least one remote master controller~~(s)~~ ~~(101)~~ and the central controllers ~~(100)~~; and

reprogramming the central controllers ~~(100)~~ to enable at least one said newly added device~~(s)~~ ~~(64)~~ and ~~its~~ at least one local controller~~(s)~~ to be used in the method.

5. (Currently amended) The method as claimed in ~~any~~ ~~preceeding~~ claim 1, including the steps of:

transmitting data between ~~the~~ at least one remote master controller~~(s)~~ ~~(101)~~ and the central controllers ~~(100)~~; and

reprogramming the central controllers ~~(100)~~ to enable the central controllers ~~(100)~~ to control existing local controllers in a different manner.

6. (Currently amended) The method as claimed in ~~any~~ ~~preceeding~~ claim 1, including the step of feeding back data signals from ~~the~~ at least one device~~(s)~~ ~~(61, 62, 63)~~ to the at least one local controller~~(s)~~.

7. (Currently amended) The method as claimed in ~~any~~ ~~preceeding~~ claim 1, including the step of feeding back data signals from ~~the~~ at least one local controller~~(s)~~ to the central controllers ~~(100)~~.

8. (Currently amended) The method as claimed in ~~any~~ ~~preceeding~~ claim 1, wherein ~~method step (d)~~ the step of transmitting data between at least one local controller and at least one associated device includes controlling ~~the~~ at least one device~~(s)~~ ~~(61, 62, 63)~~ by at least the steps of:

activating or powering a sensor ~~(62)~~ ~~and/or~~ or valve ~~(63)~~; ~~and/or~~ and

actuating a compressor, pump ~~and/or~~ or actuator ~~(61)~~.

9. (Currently amended) The method as claimed in ~~any~~
~~preceding~~ claim 1, including the ~~step~~ steps of:

connecting the central controller ~~(100)~~ of ~~one~~ a
subsea control module ~~(50a)~~ to one or more central
controllers ~~(100)~~ contained in one or more other subsea
control modules ~~(50b)~~ in ~~the same or another~~ a field
development ~~(170, 180)~~ via the command/signal bus ~~(120)~~, i
and

~~wherein method step (b) comprises~~ transmitting data
between any of the central controllers ~~(100)~~ and any of the
local controllers contained in a retrievable module ~~(49a,~~
~~49b)~~ or a tree ~~(30')~~ of the same field development ~~(170)~~
via the common data bus ~~(130)~~.

10. (Currently amended) A system for controlling the
operation of devices ~~(61, 62, 63)~~ of a hydrocarbon
production system, comprising:

(a) connecting means ~~(130)~~ for ~~connecting~~ at least two
central controllers ~~(100)~~ to at least one local controller,
~~the central controllers being reprogrammable and the local~~
~~controller(s) being configured to locally control the~~
~~operation of at least one respective device (61, 62, 63),~~
and control means ~~(101)~~ for remotely controlling the
central controllers ~~(100)~~ and transmitting means ~~(120)~~ for
transmitting data between the control means ~~(101)~~ and the
central controllers ~~(100)~~, and transmitting means for data
between said central controllers and said at least one

local controller in response to said central controllers
receiving signals;

~~(b) transmitting means (130) for transmitting data
between the central controllers (100) and the local
controller(s) in response to said central controllers (100)
receiving signals,~~

(b) control means for remotely controlling said
central controllers;

(c) transmitting means for data between said control
means and said central controllers;

~~(e)~~ (d) processing means for processing said
transmitted data at the said at least one local
controller(s);

and

~~(d)~~ (e) transmitting means for transmitting data
between the said at least one local controller(s) and its
at least one associated device(s) (61, 62, 63) according to
the processed data so as to locally control the operation
of the said at least one device(s);

wherein said central controllers are reprogrammable
and at least one local controller is configured to locally
control the operation of at least one respective device.

11. (Currently amended) The system as claimed in
claim 10, including means ~~(130)~~ for feeding back data
signals from ~~the~~ said at least one device(s) (61, 62, 63)
to ~~the~~ said at least one local controller(s) and from ~~the~~

said at least one local controller~~(s)~~ to ~~the~~ said central controllers ~~(100)~~.

12. (Currently amended) A computer program product comprising program code means stored in a computer readable medium for performing a method according to ~~any one of the method steps as claimed in any one of claims 1 to 9~~ claim 1 when ~~that~~ said product is run on a computer.